

AMENDMENTS TO THE CLAIMS

Please amend Claims 45 and 54-57 and add new claims 66 and 67 as indicated below.

1. **(Withdrawn)** A polypeptide fragment capable of raising a specific T-cell response, said fragment comprising a peptide selected from the group consisting of: rlqeertck (SEQ ID NO:245), rlqeertckv (SEQ ID NO:297), qlcpicrapv (SEQ ID NO:298), vleppgardv (SEQ ID NO:301), and functional equivalents having at least 75% sequence identity thereto; wherein said polypeptide fragment comprises at the most 15 amino acids.

2. **(Withdrawn)** The polypeptide fragment according to claim 1, wherein said functional equivalent comprises either:

- substitutions only in the preferred positions and only to preferred amino acid residues for a given HLA allele as identified in table 2 or,
- at the most 10 amino acids.

3. **(Cancelled)**

4. **(Withdrawn)** The polypeptide fragment according to claim 1, wherein the specific T-cell response is measured as more than 50 peptide specific spots per 10^6 cells in an ELISPOT assay performed either:

- without pre-stimulation in vitro or,
- after stimulation in vitro or,
- using PBL from an individual that has not been subjected to immune therapy against a neoplastic disease.

5-6. **(Cancelled)**

7. **(Withdrawn)** The polypeptide fragment according to claim 1, wherein the polypeptide fragment is characterised by having a C_{50} value, measured as the concentration (μ M) of the polypeptide fragment required for half maximal binding to a MHC (Major Histocompatibility Complex) class I molecule, of less than 1000.

8-11. **(Cancelled)**

12. **(Withdrawn)** A polypeptide fragment according to claim 1, wherein the fragment is capable of activating T-cell growth in vitro.

13. **(Cancelled)**

14. **(Withdrawn)** A method of selecting a peptide comprising a fragment of ML-IAP for use in a vaccine composition comprising the steps of:

- providing an individual who has not been subjected to immune therapy,
- providing a polypeptide fragment comprising a peptide consisting of at least 9 consecutive amino acid residues of ML-IAP (SEQ ID NO:1)
- testing specific T-cell responses against fragments of ML-IAP in said individual,
- selecting fragments of ML-IAP wherein said T-cell response corresponds to or is better than a predetermined selection criterium.

15. **(Withdrawn)** The method according to claim 14, wherein said peptide is selected from the group consisting of: rlqeertck (SEQ ID NO:245), qilgqlrpl (SEQ ID NO:55), ltaevppel (SEQ ID NO: 100), gmgseelrl (SEQ ID NO:84), elptprrev (SEQ ID NO:200), rlqeertckv (SEQ ID NO:297), qicpicrapv (SEQ ID NO:298), llrskgrdfv (SEQ ID NO:300), vleppgardv (SEQ ID NO:301), pltaevppel (SEQ ID NO:302), and functional equivalents having at least 75% sequence identity thereto.

16. **(Withdrawn)** The method according to claim 15, wherein said polypeptide fragment comprises at the most 15 amino acids.

17. **(Cancelled)**

18. **(Withdrawn)** The method according to claim 14, wherein said predetermined selection criterium is more than 50 peptide specific spots per 10^6 cells in said ELISPOT assay.

19. **(Withdrawn)** A medicament for treating a clinical condition in an individual in need thereof, comprising a polypeptide fragment according to claim 1.

20. **(Withdrawn)** A method of treatment of a clinical condition in an individual in need thereof comprising administering a medicament comprising one or more polypeptide fragments according to claim 1.

21. **(Withdrawn)** The method according to claim 20, wherein said clinical condition is:

- cancer or,
- malignant melanoma or,
- an auto-immune disease.

22-23. **(Cancelled)**

24. **(Withdrawn)** The method according to claim 20, wherein at least one of said polypeptide fragments is restricted to an HLA molecule present in said individual.

25-26. **(Cancelled)**

27. **(Withdrawn)** A vaccine composition comprising at least one isolated polypeptide comprising at least one peptide selected from the group consisting of: rlqeertck (SEQ ID NO:245), rlqeertckv (SEQ ID NO:297), qlcpicrapv (SEQ ID NO:298), vleppgardv (SEQ ID NO:301), and functional equivalents having at least 75% sequence identity thereto; and a pharmaceutically acceptable carrier and/or adjuvant.

28-29. **(Cancelled)**

30. **(Withdrawn)** The vaccine composition according to claim 27 comprising an adjuvant, wherein the adjuvant is selected from the group consisting of Montanide IAS-51 and QS-21.

31. **(Cancelled)**

32. **(Withdrawn)** The vaccine composition according to claim 27 comprising a carrier, wherein the carrier is a dendritic cell.

33. **(Withdrawn)** The vaccine compositions according to claim 27, wherein the composition comprises more than one different ML-IAP fragment according to claim 1.

34. **(Cancelled)**

35. **(Withdrawn)** The vaccine composition according to claim 33, wherein the composition comprises:

- at least 2 different ML-IAP fragments each capable of associating with a different HLA molecule selected from the group consisting of HLA-A2, HLA-A1, HLA-A3, HLA-A24, HLA-B7, HLA-B27, and HLA-B44 or,

- at least one class I-restricted ML-AIP peptide and at least one class II-restricted ML-IAP peptide.

36. **(Cancelled)**

37. **(Withdrawn)** A pharmaceutical composition comprising the vaccine composition according to claim 27 and an anti-cancer medicament.

38. **(Cancelled)**

39. **(Withdrawn)** A kit of parts comprising at least one polypeptide comprising at least one peptide selected from the group consisting of: rlqeertck (SEQ ID NO:245), rlqeertckv

(SEQ ID NO:297), qlcpicrapv (SEQ ID NO:298), vleppgardv (SEQ ID NO:301) and functional equivalents having at least 75% sequence identity thereto; and a bioactive compound selected from the group consisting of: a chemotherapeutic agent, an immunotherapeutic agent, and a second cancer vaccine composition.

40. **(Cancelled)**

41. **(Withdrawn)** A method for treatment, or prophylactic-treatment of an individual diagnosed with cancer or at risk of developing a cancer, said method comprising the step of administering to the individual;

- the polypeptide fragment according to claims 1,

- or a vaccine composition comprising at least one isolated polypeptide comprising at least one peptide selected from the group consisting of rlqeertck (SEQ ID NO:245), rlqeertckv (SEQ ID NO:297), qlcpicrapv (SEQ ID NO:298), vleppgardv (SEQ ID NO:301) and functional equivalents having at least 75% sequence identity thereto; and a pharmaceutically acceptable carrier and/or adjuvant,

- or said vaccine comprising an anti-cancer medicament,

- or a kit of parts comprising at least one polypeptide comprising at least one peptide selected from the group consisting of rlqeertck (SEQ ID NO:245), rlqeertckv (SEQ ID NO:297), qlcpicrapv (SEQ ID NO:298), vleppgardv (SEQ ID NO:301) and functional equivalents having at least 75% sequence identity thereto; and a bioactive compound selected from the group consisting of a chemotherapeutic agent, an immunotherapeutic agent, and a second cancer vaccine composition.

42-44. **(Cancelled.)**

45. **(Currently amended)** A method for raising a specific T-cell response against an epitope of ML-IAP (SEQ ID NO:1) in an individual, said method comprising the steps of administering to the individual a polypeptide capable of raising a specific T-cell response, said polypeptide comprising a peptide selected from the group consisting of: ~~rlqeertck~~ RLQEERTCK (SEQ ID NO:245), ~~rlqeertckv~~ RLQEERTCKV (SEQ ID NO:297), ~~qlcpicrapv~~ QLCPICRAPV (SEQ ID NO:298), ~~vleppgardv~~ and VLEPPGARDV (SEQ ID NO:301); wherein said polypeptide comprises at the most 15 amino acids, and raising a specific T-cell response against an epitope of ML-IAP in the individual.

46. **(Cancelled)**

47. **(Withdrawn)** An antibody capable of specific recognition of a polypeptide fragment according to claim 1.

48. **(Withdrawn)** A method for activating and expanding T-cells specific for ML-IAP or fragments thereof comprising the steps of co-cultivating T-cells and one or more polypeptide fragments according to claim 1.

49. **(Withdrawn)** The method according to claim 48, wherein the method comprises: generating and loading monocyte-derived dendritic cells (DC) with said polypeptide fragment(s) and co-cultivating said DC and peripheral blood monocytes (PBMC) comprising T-cells or, generating *Drosophila melanogaster* cells expressing one or more different HLA molecules, loading said *Drosophila melanogaster* cells with said polypeptide fragment(s) and co-cultivating said *Drosophila cells* with peripheral blood monocytes (PBMC) comprising T-cells -or T-cells purified from PBMC.

50. **(Cancelled)**

51. **(Withdrawn)** ML-IAP specific T-cells obtained by the method according to claim 48.

52. **(Cancelled)**

53. **(Withdrawn)** A method of treatment of a clinical condition in an individual in need thereof, comprising administering a medicament comprising ML-IAP specific T-cells according to claim 51.

54. **(Currently amended)** The method of Claim 45, wherein said polypeptide comprises the peptide-~~rlqeertek~~ RLQEERTCK (SEQ ID NO: 245).

55. **(Currently amended)** The method of Claim 45, wherein said polypeptide comprises the peptide-~~rlqeertekv~~ RLQEERTCKV (SEQ ID NO: 297).

56. **(Currently amended)** The method of Claim 45, wherein said polypeptide comprises the peptide-~~qlcpicrapv~~ QLCPICRAPV (SEQ ID NO: 298).

57. **(Currently amended)** The method of Claim 45, wherein said polypeptide comprises the peptide-~~vleppgardv~~ VLEPPGARDV (SEQ ID NO: 301).

58. **(Previously presented)** The method of Claim 45, further comprising administering an adjuvant to the individual.

59. **(Previously presented)** The method of Claim 45, wherein the adjuvant is Montanide IAS-51 or QS-21.

60-65. **(Cancelled)**

66. **(New)** The method of Claim 45, wherein said administering comprises administering to said individual at least one peptide capable of binding an HLA molecule expressed in the individual.

67. **(New)** The method of Claim 45, wherein the individual has at least one of tissue type HLA-A2 and HLA-A3.